

**Notice of Allowability**

Application No.

10/707,211

Examiner

Jimmy T. Vu

Applicant(s)

LONDRE, DALE A.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/7/06.
2. ☒ The allowed claim(s) is/are 1,3-11 and 15-43.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

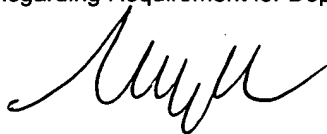
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



TUYET VO  
PRIMARY EXAMINER

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1, 3-11 and 15-43 are allowed.
2. The following is an examiner's statement of reasons for allowance:

None of the prior art teaches the subarray beamformer for the multi-beam phased array antenna comprising the second beamforming layer having the second plurality of combiners in the second orientation coupled to and opposing the first plurality of combiners, the second plurality of combiners combining the second set of signals to form at least one first combined signal, wherein the first plurality of combiners are in the first unidirectional orientation and the second plurality of combiners are in the second unidirectional orientation orthogonal to the first unidirectional orientation as in claims 1, 23, 35 and 39, wherein the first beamforming layer having the first plurality of dividers in the first orientation coupled to and opposing the second plurality of dividers, the first plurality of dividers dividing the second set of signals to form the first set of signals as in claims 29, 37 and 41, and wherein the third beamforming layer having the third plurality of dividers in the third orientation coupled to and opposing the fourth plurality of dividers, the third plurality of dividers dividing the fourth set of signals to form the third set of signals as in claims 42 and 43.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. The prior art made of record and relied upon is considered pertinent to applicant's disclosure. The best consider with this application can be filed in Hirshfield (U.S. Patent number 5,623,269), Lichten (U.S. Patent number 5,963,167), and Brookner (U.S. Patent number 6,232,920 B1).

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Vu whose telephone number is (571) 272-1832. The examiner can normally be reached on M - F: 9 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.

Jimmy Vu

November 08, 2006



**TUYET VO  
PRIMARY EXAMINER**